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Bueche et al.

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[54] **AFTERLOADER WITH ACTIVE FORCE FEEDBACK**

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[52] **U.S. Cl.** **600/7**; 600/3

[58] **Field of Search** 600/1–8

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[57] **ABSTRACT**

An afterloader for use in radiation oncology or intravascular radiotherapy comprises a wire storage mechanism for storing a radioactive-tipped sourcewire, a drive mechanism for advancing the sourcewire into a catheter or other channel implanted in a patient. A computer control system receives information from an encoder and a force sensor, which monitor the displacement of and the force exerted on the sourcewire, respectively. The displacement and force information are used to advance the wire at the fastest possible speed to the treatment site without exceeding a preprogrammed force profile designed to ensure the sourcewire does not puncture the catheter. The force profile is dynamic depending on the particular catheter being used, and catheter information may be inputted into the computer controller using a bar code or other information storage means in the catheter itself.

41 Claims, 7 Drawing Sheets